

# FACT FLASH

## 7: Pollution Prevention

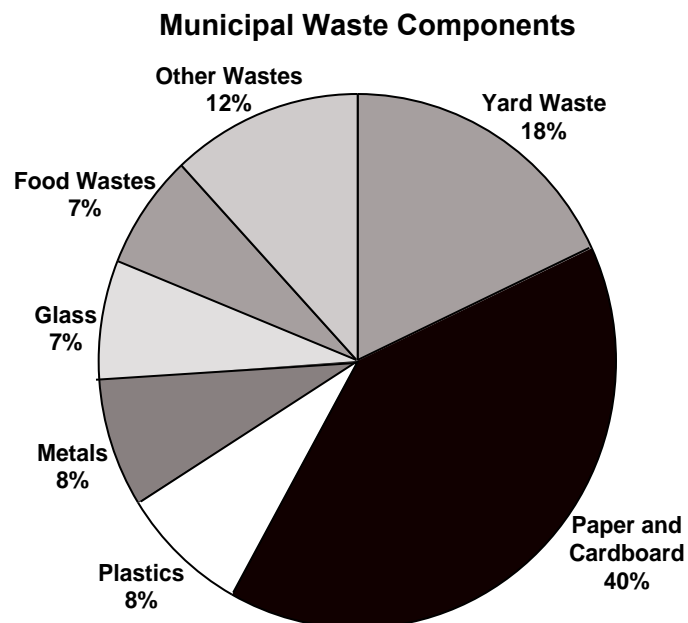
We can't make the problems caused by the waste we produce go away just by burying it in landfills. Reducing the problems our waste causes involves reducing how much waste we generate, and recycling the wastes we produce. Source reduction and recycling can reduce the amount of waste filling limited and expensive landfill space. EPA's recycling and source reduction efforts focus on wastes in three areas: municipal solid wastes, industrial hazardous wastes, and household wastes.

### ***Municipal Solid Wastes***

Municipal solid waste is generated in every place we live, work, or play — hospitals, houses, schools, businesses, football stadiums, and more. The garbage in municipal landfills consists of yard waste like grass clippings and tree branches, paper and cardboard, plastics, metals, glass, food, and other wastes. In 1990 Americans recycled or composted about 17 percent of the municipal waste they generated, and that figure is even higher today. But even though we recycled more, we also threw more away. That's why it is important to recycle, compost, reduce the amount of packaging used in the products we buy, and make products that last longer. Waste we avoid producing or that is reused is

waste we don't have to dispose of yet. Important types of waste prevention include **composting**, **recycling**, **source reduction**, and **waste-to-energy incineration**.

- **Composting** yard waste allows materials such as grass clippings and fallen leaves to decompose naturally into valuable mulch (organic matter for gardening) instead of burying them in a landfill.
- **Recycling** collects and uses a waste product in making a new product. Recycled aluminum cans, for example, can be used to make new cans.



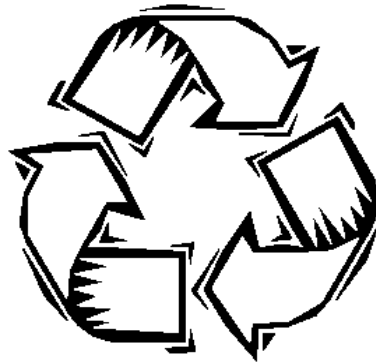
## Fact Flash 7: Pollution Prevention

- **Source reduction** is cutting the amount of waste produced in the first place by reducing the amount of hazardous substances in products, eliminating wasteful packaging, and making products last longer. Source reduction requires manufacturers to make less wasteful products and consumers to actively purchase them.
- **Waste-to-energy incineration** burns municipal waste to generate steam for electricity. Waste-to-energy plants can decrease waste volume by 60 to 90 percent, while recovering energy from discarded products.
- **Source separation** refers to preventing hazardous waste from coming into contact with nonhazardous waste. It is the cheapest and easiest way to reduce hazardous waste. Source separation reduces costs for disposal, handling, and transportation and is widely used by industry. A good example is avoiding contamination of a large amount of water by using another method to clean hazardous materials from machines or products instead of washing them.

### ***Industrial Hazardous Waste***

Why should industries reduce waste? The biggest incentive for industries to reduce the amount of waste they produce is that disposing of hazardous wastes is getting more and more expensive. When companies produce less waste, their disposal costs are lower. Companies may also profit from selling or saving recovered materials. Industries can reduce the amount of waste they produce in many ways: manufacturing process changes, source separation, recycling, raw material substitution, and product substitution.

- **Manufacturing process changes** involve either eliminating a process that produces a hazardous waste or changing the process so that it produces little or no hazardous waste. For example, many industrial operations involve applying paint. One way to reduce paint-related hazardous waste is to use low-toxicity paints, such as those that are water-based. Another way is to save excess paint and reuse it.
- **Recycling**, also referred to as recovery and reuse, is common in industry. Recycling removes a substance from a waste and returns it to productive use. Industries commonly recycle solvents, acids, and metals.
- **Substitution of raw materials** involves replacing raw materials that generate a large amount of hazardous waste with those that generate little or no waste. Manufacturers can substantially reduce waste volume through substitution. Industry often substitutes recycled products for raw natural resources. For example, a manufacturer can use recycled



aluminum cans instead of aluminum ore in making new cans. Not only can recycled materials be cheaper than raw materials, but their use creates more demand for recycled products.

- **Product substitution** involves finding nonhazardous substitutes for materials and products used routinely in homes and businesses. For example, by using concrete posts instead of creosote-preserved wood posts in construction, builders can prevent hazardous creosote from leaching into the surrounding soil or groundwater.

### ***Household Hazardous Waste***

Some work around the home may require products that contain hazardous components. These commonly used products include certain paints, cleaners, stains and varnishes, car batteries, motor oil, and pesticides. When disposed of, these products become household hazardous waste.

Americans generate 1.6 million tons of household hazardous waste a year. Household hazardous waste is sometimes disposed of improperly when it is poured down the drain, onto the ground, or into storm sewers, or by being put in the trash. Some household hazardous waste can injure sanitation

workers, contaminate wastewater treatment systems, or leak out of landfills into groundwater.

One way to reduce problems from household hazardous waste is to use nonhazardous or less hazardous compounds. People can do this by learning about alternative products that are available and choosing those that are less toxic. If you must use products with hazardous components, use only the amount you need. Leftover products can be shared with neighbors; donated to a business, charity, or government agency; or given to a household hazardous waste collection program.

Recycling is an economical and environmentally sound way to handle some types of household hazardous waste, such as used car batteries and motor oil. Auto parts stores and service stations often accept used car batteries and used oil for recycling.

Because household hazardous waste can be dangerous, you should always use, store, and dispose of materials containing hazardous waste safely. To prevent accidents, follow disposal instructions on the label and dispose of these products through a local collection program, if possible. More than 3,000 collection programs for household hazardous waste currently operate in the United States.

